

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

OLDEST BEE PAPER IN AMERICA

GEORGE W. YORK,
Editor.

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TO BEE-CULTURE.

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CHICAGO, ILL., MAY 4, 1893.

NO. 18.



Mr. Franklin Wilcox, of Mauston, Wis., is in Chicago looking after the honey and wax exhibit of his State at the World's Fair. He gave the BEE JOURNAL office a pleasant call last week. The Wisconsin exhibit will be about two-thirds comb honey, and the balance extracted.

Prof. C. L. Strickland, who has been conducting the Bee-Experiment Station at Peabody, Kans., has been obliged to give it up on account of ill-health. He will return to his former home at Maryville, Mo. We regret this very much, for Mr. Strickland was doing a good work, and we hope he may soon be able to again undertake it.

Mr. G. K. Hubbard, of Ft. Wayne, Ind., called at the BEE JOURNAL office last Thursday. He came to Chicago to look after his exhibit of bee-keepers' supplies at the World's Fair. Mr. H. is a pushing young man, and has, by dint of hard, honest work and good judgment, built up a large trade. He went to California last year hoping to find relief for Mrs. H. whose health is very poor, but little benefit resulted. We hope that in some way she may soon be enabled to regain her former strength.

Miss Wilson's Surprise Party.

—As requested on page 302, we have indirectly learned how the surprise biographical sketch and picture affected Miss Emma Wilson. Dr. Miller tells us about it in the following:

FRIEND YORK:—I tried to get Miss Wilson to write about her surprise, but she seems non-communicative on that point. When I first asked her what were her impressions on seeing herself in black ink in the AMERICAN BEE JOURNAL, she replied, "I felt very queer here"—and her hand made a rotary motion over the region where the center of circulation is supposed to be located. She looked as if she had a notion to faint!

C. C. MILLER.

Whew! we didn't contemplate any such effect! It's a grand thing that Miss W. was near a good doctor, or we might have found ourselves in a nice box—we didn't mean in our coffin, exactly, though we have seen some "nice boxes" in that line. Without further gravely joking, we hope, now that Miss Wilson has recovered, she will forgive us all around—seeing we won't have a chance to do the same thing again very soon.

The Comb-Leveler, invented by

Mr. B. Taylor, of Forestville, Minn., shown on page 567 of this number of the BEE JOURNAL, promises to be a good thing. He has prepared machinery for making them, and the price of metal part will be 60 cents each, by mail, postpaid; with a neat box for the lamp, by express, \$1.00; with box knock-down, by mail, \$1.10. After a season's use, if the machine does not prove all that is claimed for it, the money will be cheerfully returned by Mr. Taylor, for he believes each super of comb will be improved enough to pay for the leveler.

The American Apiculturist for May was, as usual, the first of the bee-papers for this month to put in an appearance. It reached our office on April 26th. Bro. Alley "gets there" on time, which is something we can appreciate, for we are great believers in *promptness*, as our readers well know who have from week to week received the BEE JOURNAL so regularly for so many years.

Bro. Alley devotes his May number to a thorough consideration of the "Queen-and-Drone Trap," in comparison with self-hivers. Bro. A. says: "It must be evident to all that there is no particular need of self-hivers in the apiary. The queen-trap will do all the work." He quotes a great deal from the *Review* for March and April, and concludes that "Editor Hutchinson strongly decides in favor of the trap as the most practical arrangement for managing bees at swarming-time."

Frame Size for Queen-Rearing.

—Mr. G. M. Doolittle, in a carefully written article in *Gleanings*, in answer to "What size of frame shall we use in queen-rearing?" says that after years of trial he has failed to find any special advantage in a small frame, but rather disadvantages. In view of this, he advises using the same size frame in the nucleus hive as has been adopted for general use in the apiary.

Some Queen-Rearing Lessons

will soon be given by Mrs. Atchley in her department of the BEE JOURNAL. It will form a portion of the lessons of "Our School in Bee-Keeping" series, and will be mainly a recapitulation of the "Queen-Rearing Dialogue" published last fall. A number of the new subscribers have urgently requested that this be done, and while it will benefit them, it will at the same time refresh the minds of the older readers.

Candy for Spring Feeding.—In *Gleanings*, Mr. J. O. Leinhardt, of Clinton, Tenn., gives this method of fixing candy for feeding bees in the spring:

In the spring, lay a newspaper on the floor or table, and form a box by putting square sticks under the edges of the paper. Four in the candy; when cool, break it in pieces, and put it into your basket, and go to the apiary and pull back the quilt from

over the cluster; give a piece according to your colony, with the paper side up, and you can tell when it is gone, by the bees carrying the paper around the entrance—that is, if they can fly.

In a foot-note, following the above, Bro. Root says: "Bees carrying paper" out at the entrance would certainly indicate when the food was used up. A rather bright idea."

The End of the Rope has not yet been reached in apicultural things, says Mr. H. P. Langdon, of house-apary fame, in the last *Review*. He is "astonished that some of our head-lights should think and say that bee-keeping has reached the climax of perfection, or 'reached the end of the rope.' Why, last year came self-hivers, and next will come non-swarmer without extra work, and with more and a better quality of honey; THIS I KNOW TO BE A FACT. Watch for it." Verily, there is to be something "new under the sun." Keep your telescopes in good repair, and examine all the "stray straws" you may see, for 'tis said that "straws show which way the wind blows."

The Illinois Convention Report

—Mr. Jas. A. Stone, of Bradfordton, Ills., the Secretary of the Illinois State Bee-Keepers' Association, desires us to announce that the postage provided for the sending out of the First Annual Report of the Illinois State Bee-Keepers' Association is exhausted, though he still has on hand about 500 copies. The Executive Committee have decided that any party living in the State of Illinois can have a copy of the Report by forwarding, with their address, 6 cents in stamps to pay postage on the same; and from those living outside of the State, 20 cents in stamps will be required. Send to Secretary Stone at once if you would like a copy. It will pay you to do so.

Bees and Watering Troughs.

It has been a question with some bee-keepers how to keep their bees away from watering-troughs, as they often annoy horses and other farm stock that drink from the trough. Mr. Edw. Smith, of Carpenter, Ills., in *Gleanings*, recently said that he greases the tops of the watering-troughs with any kind of old grease, with a little kerosene mixed with it, and has not had a bit of trouble with bees in them since.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Hive that Had Diseased Bees.

Is it injurious to put bees into a hive where a colony has died with diarrhea? Sherwood, N. Y. GEO. L. WINTERS.

ANSWER.—No; the bees will clean it out, but if too filthy they might desert.

One or Two Rowed Zinc.

Which is the better, one or two rows of zinc for queen-excluding honey-boards? Is it quite necessary to use two rows? Give me your best advice. Bishop Hill, Ills. D. LINDBECK.

ANSWER.—Opinions differ. Perhaps it doesn't make much difference.

Origin of the Honey-Bee.

Please give in the BEE JOURNAL information as to the substance and process through which the honey-bee originated. C. S. PIZER.
Franklin, Pa.

ANSWER.—Probably you can get no more reliable information than that contained in the first chapter of Genesis.

Honey or Sugar Syrup for Breeding.

I bought 5 good colonies of bees of one of my neighbors last week for \$80. There are plenty of bees in every hive, but they are light in stores. I have about 20 pounds of choice comb honey all in one-pound sections. Would you give them that, or feed sugar syrup? Which is the better to breed up on? The bees were all wintered in a good, dry cellar, and were not taken out until April 3rd. WM. KITTINGER.
Caledonia, Wis., April 3, 1893.

ANSWER.—If the honey were worth no more than the sugar syrup, we should prefer it to feed. There may not be a great deal of difference, but we know that honey is the natural food for them, and the little pollen that may be float-

ing in it gives it some advantage. But at the present prices, choice comb honey being high, and sugar very low, we don't believe there is as much difference in the value as in the price of the two, so we think we should sell the honey (provided we didn't need it on our own table) and feed sugar syrup. The bees can probably get enough fresh pollen to make up any difference, and if they cannot get pollen enough from natural sources, it may be well for you to feed some kind of meal as a substitute.

Getting Bees to Empty a Super.

I began bee-keeping last summer with 3 colonies, two of which were in dovetailed 8-frames hives, and the other was in an old box-hive. The two in the dovetailed hives wintered very well on the summer stands, but the one in the box-hive either froze, or was smothered to death. They did not starve, for there is just lots of nice comb honey in the hive. Now would it be advisable for me to put an empty super on one of the dovetailed hives, and take the honey out of the box-hive and put into this empty super? Would the bees carry it down and put it in the empty combs of their own hive? If they would, they would be all ready to work in the super when the honey-flow comes.

WALLACE H. McCORMICK.
Ransom, Ills., April 4, 1893.

ANSWER.—Sometimes they will carry it down in good shape, and sometimes they will not. If they have a good supply below they may leave it. You may succeed better by putting it in an empty super or hive below, that is, if your hives have loose bottom-board. The farther it is below their combs the surer they are to take it.

Swarm Scattering all Over a Tree.

I had 3 colonies of black bees, spring count, in 1892, and about May 12th one swarm came out and alighted all over a small quince-tree. The tree was black with bees, and I had to sprinkle water on them to make them bunch up, and then I hived them. No. 1 swarmed, and went back into the old hive again. Then No. 2 swarmed, and I put them into a hive. They stayed in, but had alighted the same as No. 1, all over the same bush. No. 3 swarmed well; No. 2 and No. 3 stored each about 15 pounds in the supers. No. 1 came out again, and scattered all over the tree. I

put them into the hive, and set them between No. 2 and No. 3, not over 8 inches apart. No. 1 left the hive again, and went into No. 3's hive. No. 3 carried them out dead. One old colony was destroyed with moth-worms, so I have 4 colonies in good condition. Why did they alight all over the tree? The wind blew very hard both times. Did that cause it?

J. C. DILL.

Morganville, N. J., March 18, 1893.

ANSWER.—It is nothing unusual for bees to settle in a scattered way over a tree, and a strong wind would increase the tendency in that direction.

Queer Actions of a Colony.

On March 14th I had a colony to come out and settle on the other hives. I caught the queen, clipped her wing, and took her back, but the bees would not follow, and all perished. The queen was all right, and they had plenty of honey. It was a strong colony, with some young brood. What was the matter? I have been keeping bees more than ten years, but never had such a thing occur.

ALLEN SPRINGER.

Rose Bud, Ills., March 20, 1893.

ANSWER.—This case looks very much like one of spring dwindling, only you say it was a strong colony. Possibly some one may account for their conduct, or it may be one of those cases where bees seem to become demoralized in some way and act abnormally.

THE LAND OF DZIERZON

CONDUCTED BY

H. REEPEN,

OLDENBURG, GROSSHERZOGTHUM, GERMANY.

Apis Dorsata—Poisonous Honey.

Introduction of *Apis Dorsata* in America.—There has been written already a good deal about this bee in the "Old Reliable," but perhaps I have something new to say.

Efforts have been made to get up capital by shares, but there is only very little money necessary to introduce their race. Try to get communication with some English or American residents in Ceylon; for instance, with Mr. Holloway, who lives at Wattagama, Maria Estate,

near Kandy. When Mr. Rud. Dathe, of Eystrup, Germany, went over to Ceylon to get the "*Dorsata*," the assistance of this gentleman was very valuable to him. Dathe first spent a lot of money for bull-carts, a dozen of natives for assistance, etc., and many a day was spent in those immense virgin forests to catch the *Dorsata* on the giant trees. But afterwards he caught plenty of colonies on Maria Estate, doing nothing but smoking his pipe and lying on an easy chair. *He only put some honey in the open air*, and as the *Dorsata* migrates from place to place, several swarms soon found the honey, and settled on the surrounding trees, and were easily caught. All hives were filled in a few days.

But if, for instance, Mr. Crum, of Streator, Ills., would go himself, he need not be afraid of fever. Those high mountain districts of Ceylon belong to the *healthiest* parts of the world. I know half of the world, but never met with a more healthy place.

A crossing with *Apis mellifica* is impossible, as the *Dorsata* is quite another kind of bee. Rud. Dathe noticed that worker-bees of the *Dorsata*, when brought on brood of the *Apis mellifica*, took no care of it, and within a few days the brood died for want of food.

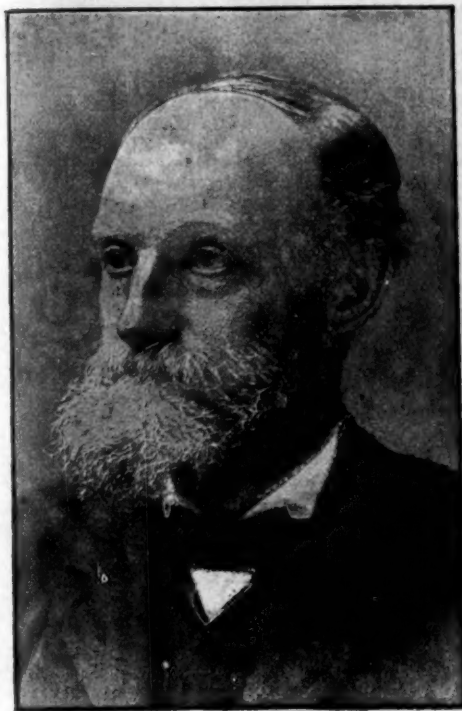
Poisonous Honey at Trebizond.—Mr. A. I. Root inquired in *Gleanings* some time ago for the address of some proper person who lived near that locality. He may write to the English Vice-Consul Billicki, who will confirm that all is correct that Zenophon once wrote, viz.: That the honey of Trebizond is *always* poisonous on account of the "deadly night-shade" which grows there in abundance. People keep a good many bees there, but only on account of the wax. There is another kind of poisonous honey in the South of Africa, in Caffraria, but this honey is only poisonous at the time when aloes is blooming.

H. REEPEN.

Bee-Keeping for Profit.—We have just issued a revised and enlarged edition of Dr. Tinker's book, called "Bee-Keeping for Profit." It details his most excellent "new system, or how to get the largest yields of comb and extracted honey." The book contains 80 pages in all, and is illustrated. Price, postpaid, 25 cents, or clubbed with the BEE JOURNAL for one year, for \$1.15.

**AMOS IVES ROOT.**

If all has worked as we had planned it should, this biographical sketch with picture will be a complete surprise to

**A. I. ROOT.**

Bro. A. I. Root. We hope it is, for we cannot now think of any one whom we would rather give a pleasant surprise than to our brother publisher and esteemed friend.

If there is one man to whom bee-keepers all over the world owe an everlast-

ing debt of gratitude, for his practical instruction and help in all departments of their pursuit, that man is A. I. Root. Dr. Miller has tried to tell some of the good things about him, but were he to tell all he could think of, we could yet say that "the half has not been told."

One has only to read his unrivalled *Gleanings in Bee-Culture*, to get an idea of the marvelous man behind it all, and to learn what can be accomplished by untiring and unselfish devotion to a great and glorious object.

Although we have met Bro. Root only once or twice, yet we feel that in him, as in his honored son Ernest, we have a true friend and brother in whom we can repose the utmost confidence, and feel that we shall be the better for being permitted to count him among those whose friendship and counsels we most highly prize.

Ever since we took control of the old *AMERICAN BEE JOURNAL*, we have had much reason for esteeming Bro. Root for his brotherly interest in our welfare, and for his readiness to speak an encouraging word in our behalf whenever opportunity presented. We admire him for the good he is doing, for the host of friends he has worthily won, and for his high Christian character, the exemplification of which is so clearly shown in his daily walk and conversation. That he may live yet many years to continue to further the best interests of the cause which he has done so much to honor and bless, is our sincerest hope and earnest prayer.

We now present to our readers what Dr. Miller "knows" of Bro. Root and his great and successful business enterprises:

One who has never visited Medina, O., can hardly have any just conception of the immense establishment that is carried on there in the interest of bee-keeping. Combine a blacksmith-shop, a tin-shop, a paint-shop, a machine, carpenter, and I don't know what else, with a large printing establishment, a store and lunch-room attached—all on a large scale—and you have still to see it, and

spend a good deal of time traveling over it, before you have any fair conception of it. Of course when I say Medina, every bee-keeper knows I am talking about the establishment of A. I. Root. Just how much money is involved in the concern, I don't know, but I suppose I might have known if I had asked, for friend Root never seems to have any secrets, but I know that some years ago \$100,000 were in it, and I suppose it has been growing ever since.

Perhaps I would better say before going any further, that this is meant to be a biographical sketch of Amos Ives Root, but in dealing with such an erratic customer, I can't be expected to follow any of the biographical rules, but will say some things about him with no special thought of close connection, only trying to tell what I think I would be interested in hearing if I had not before heard it. At different times I have spent quite a number of days at Medina, and I believe I know Mr. Root fairly well.

But I'll try to follow ordinary custom long enough to tell some of the things that I could not learn by personal observation, and if you want to know just how much of what I say is original, and how much is stolen, you can refer to page 956 of *Gleanings* for 1888, where a sketch written by Ernest is to be found. Of course you know that Ernest is the oldest son—but there, I'm all out again, for I ought first to tell about A. I. himself.

Well, he was born "in a log house about two miles north of his present business," and that's as near to the date of his birth as I can get from the aforementioned sketch, but I think it was about '38 or '40. He was a frail child, and his father had little hopes of raising him, although the neighbors assured him his wife would not let him die. Among his early hobbies were poultry, windmills, clocks, electricity, chemistry, etc. He did not take kindly to feeding pigs, or, for that matter, general farm work, although he took particular delight in gardening. One of the jobs he disliked was churning. So, to cater to his mechanical turn, and at the same time get out of a disagreeable task, he rigged a windmill, and let the wind bring the butter.

At the age of 18, a craze for chemistry and electricity led him to make a lecturing tour, in which he gained no great amount of wealth, but did gain that which was afterward of greater value to him—a knowledge of human nature. A further addition to this stock of knowledge was gained by his experi-

ence as "schoolmaster" in a tough country school, where for some time the larger boys had made good their threat that they would "lick and put out" any teacher the directors might select. But this time the slender young man, Root, by virtue of a wise use of what physical strength he had, and a still wiser course as a tactician, "licked," and made friends of the bullies.

His next hobby was clock-work and jewelry, and without capital, he literally worked himself into a business so large that the firm of A. I. Root & Co. employed over a dozen men and girls in the manufacture of gold and silver rings, chains, etc., from \$200 to \$500 in coin being weekly used up in this way.

In 1861 he was married to Miss Susan Hall, and to his wife he very justly attributes much of his success in life. Quiet and unassuming, keeping herself always in the background, none the less she is a real power, and a power always for good. There are five children in the family. Ernest is now nearly 31, then comes Maud (Mrs. J. T. Calvert), then the two girls, Constance and Caddie, then the youngest son, Huber.

In 1865, the capture of a runaway swarm of bees started Mr. Root into bee-keeping. Being one of the intense sort, he went into bee-keeping with all his might. Not long after this, I made my first visit to Medina, having learned about Mr. Root in some way through the *AMERICAN BEE JOURNAL*, to which he contributed some unique, practical and very readable articles over the *nom-de-plume* "Novice." A short time before a fire had destroyed his store, his jewelry business was crowded into his house, and another visitor there at the time, made beds rather scarce, so I slept that night with Mr. Root. While getting ready for bed he talked about the possibilities of a sugar-bush in connection with an apiary. After we got in bed the subject was continued, and we talked about it, at least he did, until it was pretty late, and when I went to sleep he was talking about a plan to have a bee-hive under each maple-tree, with a spout of some kind to let the sap run directly into the hive so the bees needn't fly at all.

That settled me in my opinion of him in one respect, and I've never seen occasion to change my opinion. He's a hobbyist—one of the hobbyest of hobbyists.

The next morning he showed me his bees, and I showed him how to smoke bees by blowing with my mouth on a burning brand. Smokers were then un-

known, and he was quite pleased with the new acquisition, and before I had got very far away, he had succeeded in setting fire to the sawdust and burning up, I think, one of his colonies.

In 1869, I think it was, he got \$1,500 for the honey from 48 colonies. A shower of inquiries induced him to send out a circular answering the main part of the inquiries. Several editions of this circular were sent out gratis to all applicants, and then it occurred to him to issue a quarterly under the name of "Gleanings," at 25 cents a year. The cordial reception to this led him to change it to a monthly before the issue of the second number, and at a later date it was changed to a semi-monthly.

In the meantime he commenced to manufacture bee-keepers' supplies, his total force being himself, a windmill, and the lad Ernest. By the way, I think the windmill is one of his most enduring hobbies. For a time *Gleanings* was printed with a windmill, and of late years an abundant supply of water is furnished to the factory by an immense windmill on an adjacent elevation. On one of my visits he said to me, with much the tone he would have used if I had called in question his loyalty to his government, "Why, you haven't been to see the windmill!" From that small beginning with the windmill, gradually, year by year, grew the largest bee-supply establishment in the world, of which I spoke in my opening paragraph. That business was his hobby, and he threw into it all his energy, and by prompt and fair dealing, trying to do always as well or a little better than agreement, he has obtained a strong hold upon customers in all parts of the world.

Other hobbies have claimed his attention, carp-raising being one of them; among the rest market gardening, and this seems to have a lasting hold, partly for his love of the business itself, and partly because it furnishes a means of employment for many who need it.

His latest hobby is, I believe, the bicycle.

With the strong impulses he possesses, he is not likely to hold middle ground in anything. So he has put his religion into his business in such a way that some who do not know him, accuse him of doing it for ostentation and gain. Whoever comes to know him well enough can never hold such a view. Whatever else they may doubt about him, they will never doubt his utter sincerity. Indeed, ostentation is no part of the man in any respect. I happen to know of more than one occasion in which he

has used money liberally for what he considered the general good of bee-keepers, without allowing it to be known to more than two or three participating.

Every day the factory whistle sounds 10 minutes before 12, to give all the employes an opportunity of 10 minutes at a prayer-meeting held in the largest room of the factory, thus taking none of their own time for it. Aside from his usual church and Sunday-school attendance, part of his regular Sunday programme is to visit his aged mother—one of the sweetest old saints I ever knew—and on the way to stop at the county jail, to be locked in with whatever prisoners happen to be there, for half an hour, or an hour, to try to lead them toward a better life. On Saturday, in the midst of business hours, he goes a mile up town to attend the church prayer-meeting.

In personal appearance there is nothing remarkable about him. You would pass him in any crowd without ever thinking of him as the steam-engine that he is. Rather under the medium height, and of slight build, he atones for his lack of distinguished appearance by having a good-looking son, of commanding presence.

Seen at a distance, you will respect A. I. Root for his remarkable business qualifications. Seen at shorter range, you will at first be puzzled to know what to make of him, but as you get to know him better, you will give him a high place in your esteem, as a man of warm heart, unselfish earnestness, and thorough integrity.

C. C. MILLER.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
May 18, 19.—South Texas, at Wharton, Tex.
T. H. Mullin, Sec., Eagle Lake, Tex.

[37] In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller....Marengo, Ills.
VICE-PRES.—J. E. Crane.....Middlebury, Vt.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York....Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.



Removing Honey from Brood-Combs to the Sections.

Query 869.—I frequently have more money in brood-combs than I wish to extract, not having good sale for it. Is there any profitable way of inducing the bees to store the honey from these frames in sections, without extracting it?—N. H.

I think not.—JAS. A. GREEN.

I do not know.—MRS. L. HARRISON.

If so, I am not aware of it.—P. H. ELWOOD.

"Contract" and crowd.—WILL M. BARNUM.

I have had no experience in this kind of work.—A. B. MASON.

Why not feed it in the spring, then run all for comb?—C. C. MILLER.

No, sir. Extract and dilute with one-fifth water, and feed back.—MRS. J. N. HEATER.

If I were going to get the honey in sections, I would extract it and then feed it to the bees.—E. FRANCE.

It might be done by restricting the brood-nest and uncapping the cells, and putting the combs between combs of brood.—M. MAHIN.

Not that I know of. I have never found it profitable for bees to handle honey the second time in any way.—EMERSON T. ABBOTT.

If the bees are storing in the supers, they will sometimes carry the honey from the brood-combs, above, if we uncapped them.—A. J. COOK.

I have never found any such way, and I doubt whether honey can be fed back at a profit. Keep these frames to use in impoverished colonies.—J. E. POND.

I have never tried it, but would think if they stored "sugar syrup" when placed out for them, they would do the same by the combs mentioned.—JAS. A. STONE.

After it is stored in frames it is cheaper and better to extract; and if it is slow sale in your home market, ship to a better one, provided you cannot work up a home market.—H. D. CUTTING.

I don't know. If you put two combs in the center of each hive into which you put a swarm, the bees would probably carry most of it into the sections, if honey was coming in pretty well.—R. L. TAYLOR.

Use your judgment, and don't have too many combs left, and use what you do have left for spring feeding. There is nothing better. Such work as is proposed above is at least not advisable.—J. H. LARRABEE.

I don't know of any. But I should take steps to prevent a like occurrence in the future, by contracting the hive. Get the honey stored in sections instead of in brood-frames where you don't want it.—EUGENE SECOR.

N. H. should prevent the bees from storing so much honey in brood-combs. It will be found more profitable to do this than to try to get the bees to uncapped their honey and put it where they do not want it.—G. L. TINKER.

I know of no sure way of inducing bees to remove honey from comb in the hive to the sections. Shaving the capping off does not always succeed, as the bees frequently only cap it over again. Better extract and feed.—C. H. DIBERN.

You can, by placing the combs in a box or hive in front of the entrance of a colony that is working in the sections. Communication between colony and combs must be managed so that no robbers can get at them.—J. P. H. BROWN.

Not that I know of, unless you can call the changing of this honey into young bees, and having more bees to gather an extra amount from the fields and store it in the sections, a profitable way of using that honey. I call this a profitable way to use such honey, but perhaps others would not.—G. M. DOOLITTLE.

I can't say about the profit part, but you can get your strong swarms to take the honey out of the combs by hanging them, a few at a time, in an extra hive, set under the brood-nest of those you wish to feed. It will hasten matters somewhat if the lower hive has more light than the upper hive, by using a piece of glass.—S. I. FREEBORN.

No. Should such a condition occur in my hives, I would leave the honey in the "brood-combs" until spring, and these full combs would help to put the brood-nest in condition early in the season, and I would get the more surplus by it. I don't see how your "brood-combs," in the breeding season, where most of them ought to be filled with brood, could contain a great amount of honey. But such a state of things might occur in the

fall, after breeding is over. I can feed it back and convert it into comb, but I have to extract it first.—G. W. DEMAREE.

No way that I know, without extracting it. You might extract the honey, and contract the brood-nest, put on unfinished sections over queen-excluding honey-boards, and feed it back to them, and get unfinished sections profitably finished; but to get sections filled from the start, I think would be unprofitable. If I had such honey I would try to use it profitably some other way.—MRS. JENNIE ATCHLEY.



CONDUCTED BY

Mrs. Jennie Atchley,
GREENVILLE, TEXAS.

Report of the Texas State Bee-Keepers' Convention.

The 15th annual convention of the Texas State Bee-Keepers' Association met at the apiary of Mrs. Jennie Atchley on April 5 and 6, 1893.

FIRST DAY—MORNING SESSION.

At 10 a.m. the meeting was called to order by Pres. W. R. Graham, who stated the object of the convention, and said he was proud to see so many present, and that he knew bee-keeping was now on a solid basis, and increasing in Texas.

The roll was called, and the following bee-keepers responded:

W. T. Pryar,
T. E. Miller,
Melvin Kimbrough,
A. M. Tuttle,
P. G. Carter,
Jason Ayer,
G. P. Cieny,
J. R. Atchley,
T. E. Carter,
Willie Atchley,
W. R. Graham,
J. A. Bailey,
Mrs. Ellen Atchley,
Charlie Williams,
Charley Atchley,
Wm. Stapleton,
W. H. White.

A. H. Jones,
Dr. W. E. Smith,
H. L. Bolton,
J. A. Meeks,
W. H. Bailey,
Joel Simmons,
D. T. Willis,
N. N. Atchley,
C. M. Davis,
C. J. Cutler,
E. Atchley,
Mrs. Jennie Atchley,
Levi Williams,
Miss Amanda Atchley,
B. B. Steed,
John Huokabee,
Dr. W. R. Howard,

W. E. Pennington,
J. T. Spradling,
T. E. Phillips,
J. F. Teel,
Mattie Buzley,
S. J. Duff,
E. S. Cathey,
Myrtle Lloyd,
Miss Nannie Litton,
Sammy Litton,
Miss Addie Graham,
H. Pennington,
T. A. Beasley,
J. R. Graham,
J. S. Robinson,
Martha E. Robinson,
Josie Huckabee,
Miss Leah Atchley,
Dollie Huckabee,
Miss Maud Robinson,
Miss Nellie Graham,
Dr. W. K. Marshall,
J. D. Givens.

All then joined in singing a hymn, after which was prayer by Rev. W. K. Marshall, D. D. Another hymn was sung, and then the minutes of last meeting were read and approved.

A committee of three was appointed to arrange a programme for the day, composed of E. J. Atchley, A. H. Jones, and J. A. Bailey.

While the programme was being arranged, Dr. Marshall, in his usual good-natured manner, related an interesting story of early bee-keeping away back to the straw-skep time, and the story held the listeners almost spell-bound.

The committee then brought in the following questions, which were discussed and considered:

"Does any one present know of the death of one of our numbers?" None was reported.

NOISE AT SWARMING TIME.

"Does a noise made while bees are swarming induce them to settle?"

Dr. Marshall said he was passing by a farm-house not long since, while there was a swarm of bees in the air, and that all the children and the mother were ringing bells, blowing horns, and beating tin pans, and they made a success of it, as the bees settled. Of course the racket did it! This brought laughter.

C. M. Davis said he believed in making a noise, as the loud hum of the bees was more or less drowned, and it frustrated them and caused them to cluster. He believed water, dirt, or anything thrown among the bees, was a great help to get them to stop and cluster. It was decided that anything to break the ranks of swarms would induce them to settle. Even an absconding swarm could be stopped by water or dirt.

BEEs CLUSTERING BEFORE LEAVING.

"Do bees ever go off without first clustering after issuing from the parent hive?"

A. H. Jones had one swarm to leave without stopping, but it settled $\frac{1}{4}$ mile away, at the home they had selected. Others reported that swarms left without clustering, but that their selected

homes were near by, and it was decided that some swarms do leave and go clear off without clustering.

OLD QUEENS WITH FIRST SWARMS.

As it was right in the swarming season, it seemed that every one was free to talk about swarming. The next question was, "Does the old queen always go off with the first swarm?"

J. Bolton, Dr. Marshall, and others, said that in most cases the old mother queen led off the first swarm, but when bad weather prevented their swarming until a young queen hatched, she would kill the old one and lead off the swarm. But, after a discussion, it was decided that it was the oldest queen in the hive that came off with the first swarm.

QUEENS WITH 2ND AND 3RD SWARMS.

"How many queens usually come off with a second or third swarm?"

Dr. Marshall said that in natural swarming there were usually only one or two cells started the first day or two of their preparations to swarm, and that about the third day they usually start the rest, and that, as a rule, there were only one or two queens with a second swarm, but that a third swarm may have 6 to 10 queens, according to the amount of cells they started.

As 12 o'clock was drawing near, and as the day was warm and pleasant, the convention was held right among the bees, under the shade of the trees; and as most of the bee-keepers were beginning to "swarm out," and stroll about through the large apiary and pleasant woodland, and into the factory, and all over the place, a motion was carried to adjourn for dinner, to meet at 2 p.m.

Mrs. Jennie Atchley and W. R. Graham then threw open their doors, and gave the bee-keepers free and full access to the premises, W. R. Graham entertaining and feeding 30 bee-keepers, and Mrs. Atchley 28. For two hours all seemed to enjoy themselves like a lot of school children at recess, forming themselves into little groups, here and there, each one talking about his or her best bees, and best management, etc. These recesses are very interesting, as many will talk at recess when they will not say a word in school.

(Continued next week.)

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for \$1.40.



Report of the Indiana State Bee-Keepers' Convention.

Written for the American Bee Journal

BY WALTER S. POWDER.

(Continued from page 529.)

FIRST DAY—EVENING SESSION.

The convention was called to order at 8 p.m., with Pres. Russell in the chair, who said: To commence our evening session, we will have first an essay by Mr. J. B. Catterson, of Brownsburg, on

The Winter Problem in Bee-Culture.

The person who successfully winters his bees is a successful bee-keeper, because if he has his bees in proper condition when the honey season comes, they will do the rest themselves. What I shall say in this essay is intended to benefit the average bee-keeper of Indiana, and localities having a similar climate.

The work of preparing the bees for winter must begin early in the fall. First, they must have food sufficient to carry them through the winter and until warm weather comes in the spring; and perhaps better still, enough for all purposes to last them until they can gather their living themselves.

Second, they should be properly housed, and the colonies all made strong by uniting the weak ones and equalizing their supplies. I have kept bees for the last 25 years, and for 10 or 12 years I have been very successful in wintering them, much more so than most of my neighbors, and have secured larger crops of honey as a result. I therefore claim a fair idea of bee-keeping, but do not claim to be a specialist or an expert in any line of the business.

A good crop depends almost wholly upon a strong, healthy colony in the spring, and such a colony depends upon proper care and management in the fall. Have your bees ready for winter when winter comes, and then let them alone until winter is over. I have a

bee-house in which I winter my bees successfully. I have never used a cellar, but what I have known of cellar-wintering, from those who do use it, I do not think it is the best way, and since most people winter their bees on the summer stands, I shall confine myself to a discussion of that method.

As soon as the frost has stopped all honey-gathering, I look through the hives and arrange the frames by exchanging, if necessary, so that each colony will have not less than 25 pounds of ripened honey. If some of it is, however, unsealed, it is a matter of small consequence. Place the frames having the least honey in them in the center. Summer-gathered honey is perhaps the best for winter use, but I have never seen bees suffer by the use of fall-stored honey in wintering.

Next lay two slats $\frac{3}{4} \times \frac{1}{2}$ across the frames, about 5 inches apart, so that the space between them will be in the center of the hive over the cluster. Bevel the ends so that the quilt will lie down closely at the ends. The slats should be as long as the width of the brood-chamber; then across these nail others in length as long as those are wide apart, in sufficient numbers to hold up the mat when placed upon them. This makes a space over the cluster through which the bees can pass over the frames in cold weather to the honey in the outside frames. In addition to this, holes may be cut through the combs for the same purpose, if thought necessary.

Over this frame arrangement I spread a heavy woolen cloth, entirely covering the brood-chamber, and then I partly fill a common coffee or sugar sack with excelsior, forest leaves, chaff, or an equivalent, and press it down evenly on the frames. Then I tilt the hives forward about one inch in twelve, leaving the front entrance entirely open. The hives are now ready for whatever outside protection is desired to give them.

To all who wish to further protect the hives, I would suggest this plan as a cheap and handy one:

Place the hives in rows facing east or south, so that there will be about 10 inches of space between them. Then place a protection of boards all around them except in front, leaving a space of 10 inches between the boards and the hives, into which and between the hives pack leaves, chaff, cut-straw, or excelsior, so that it will come above the brood-chamber, and let it remain this way until May, or longer, if the weather is fickle. All should be covered up with

boards, however. Bees placed in this way will winter every time, and come out in the spring strong and healthy. The man who thus takes care of his bees will only know of spring dwindling by what he hears from his less careful neighbors.

I prefer not to winter my bees on sugar syrup, and never burglarize the brood-chamber to do so. I fail to see the advantage or the good policy in doing so. Let the bees, and not the hives, gather the honey, and then the sugar-refiners will not be benefited at the expense of the bee-keeper.

The pollen theory, in connection with the winter problem, has been discussed widely, by our best apiarists, *pro* and *con*, for several years, and the mystery is, so-called, still unsolved. I believe the teachings of Mr. Muth are about correct. If I am not mistaken, his teaching is about as follows:

Pollen is a wholesome nutritious food, and essential to the bee life and health, especially to the larvæ and young bees. Its nutritious and healthy qualities, if kept dry, will last for years, but if allowed to become damp, it will sour. It then swells, bursts out of the cells, and is very unwholesome and unfit for food, for either the young or old bees. The same can be said of honey under similar circumstances, but if it is kept in a warm, dry place, it will keep forever.

Bees in the cluster, when supplied with healthy food, create a large amount of heat, and when the outside air is colder than the air within, the exhalations from their bodies condense and produce considerable dampness which must have a way to escape, or the bees and hives become damp and unhealthy; the combs become moldy, and the pollen and honey sours; the bees become diseased and die. Such food and combs are the fruitful source, and I believe the principal source, of bee-diarrhea. Moldy combs come from damp hives, and damp hives are caused by insufficient ventilation.

And now, when I have reason to believe that the cold weather is over, I place the heaviest combs nearest the cluster, put a division-board on each side, and contract the entrance. The division-board should not touch the bottom, so that the bees can pass for food placed on the opposite side. I contract the brood-chamber in order that the bees can better control the heat during cold snaps in the spring. I then place a frame of honey or a frame of syrup outside the division-board to stimulate brood-rearing. I think it is best that

bees do not begin brood-rearing too soon, because late cold snaps will compel the bees to cluster, and thus expose the brood to death.

A colony should have no more brood between the division-boards than they can well cover. Equalize the colony by taking from every strong colony a frame of brood, and exchanging it for a frame of empty comb from a weak colony. All spreading of brood is an evil, unless the bees can well cover all the brood during the cold nights.

It is proper to remember that in no case will bees from a hive having a virgin queen be accepted by a colony that has a laying queen; nor should a comb with adhering bees from a strong colony be added to a weak colony having a virgin queen, because they would be sure to destroy her at once.

Another precaution is to observe that the queen shall not be on the side of the comb next to where you place the comb with adhering bees, for by so suddenly coming in contact with a strange queen, they would probably destroy her.

This concludes my say in regard to the winter problem, and if my remarks have not been sufficiently plain, I will willingly answer any questions asked, if I can.

J. B. CATTERSON.

The foregoing essay was then discussed as follows:

Pres. Russell—You have all heard this excellent essay, which is undoubtedly one of the best ever presented on this subject before this Association; it is now open for questions and remarks.

Dr. Hicks—I have no criticism to offer but to say this—which is to say the least—that I have paid close attention to the essay on the winter problem, and without intending any flattery to him, I will say that I have kept bees for over 50 years, and I have never heard more common-sense, of the very best quality, presented to any society on this subject than I have to-night.

Mr. Muth—I also congratulate our friend on his very nice essay; it is a good one, indeed. His method is quite different from the way in which I winter my bees. I used to lay strips across the frames, using a blanket or a mat of straw, which forms a good covering, and at the same time absorbs the moisture from below. I close up the hive-entrance to about one inch in the center, and cover the brood-chamber with three boards. The bees easily seal it all around, and make it almost air-tight. On top of these boards I lay a straw mat or blanket, or perhaps both. There is

no absorption of the moisture in the hive, but I take care of that by leaving the entrance entirely open, and raise the hive about two inches at the end, and for this reason I know that the exhalations will turn into water, and run down and out from the hive. Sometimes in winter, after the coldest spells, if you raise the hive as I have said, you will be surprised at the amount of water. In this way, the air is admitted, and the bees are kept dry and healthy. It is just as handy, and a little less trouble to cover the brood-chamber up and keep the bees warm, and, to my mind, it is a much simpler way than the way Mr. Catterson speaks of.

Mr. Kitley—Mr. Muth speaks about three boards on top. Do you have the edges so that they form a perfect joint?

Mr. Muth—Yes, I use three boards because I have section boxes, three of which just cover the brood-chamber. The lids to these boxes are what I use.

Pres. Russell—I winter my bees in the same way. Mr. B. F. Bowers, of Augusta, has one of the most successful bee-resorts in Marion county to-day, and he spreads just a cloth over the brood-chamber, and when the cold weather comes, he turns that cloth back half way, leaving this board open (illustrating). By this method he has never yet lost any bees from the cold. He is so successful because he gives them air; he says that they require it.

Mr. Muth—I think that we should keep the bees dry on top, for the simple reason that if the cold air strikes them, it will kill them surely, and why Mr. Bowers puts his covering half way back, is something I cannot comprehend. If there are those who are more successful in opening the boards and allowing the bees air, than those who keep them warm, I should like to see them. Again, I say that the top should be kept warm and dry, and not allowed to become damp, because then both the honey and the pollen will sour. If he wants to keep his bees nicely, then he must keep them dry.

Mr. Catterson—Mr. President, do I understand that Mr. Bowers has no board at all?

Pres. Russell—No, he has never had one, and still has the quilt raised about one-half the way across his frame.

Mr. Muth—He covers the brood-chamber with this muslin quilt?

Pres. Russell—Yes.

Mr. Muth—How long has he been successful?

Pres. Russell—Some 8 or 9 years.

Dr. Hicks—This is truly an artificial

mode of wintering bees, and in direct opposition to the natural tendency and propensity of the bees. Any man that has ever handled bees in the old-fashioned movable-frame knows that the bees will seal it down every time.

FEEDING BEES FOR WINTER.

Pres. Russell—How about Mr. Catterson's method of feeding for the winter?

Mr. Muth—It is the best way of feeding that I ever heard of. This is not intended as a compliment, but as the truth.

Pres. Russell—There seems to be some trouble arising as to the proper feeder to use in the spring. It does not take so much trouble to winter the bees, as it does to get them safely through the spring.

Mr. Muth—If our bees are strong in spring, and if the fruit-trees don't bloom and the bees get no honey from that source, then unless we feed them they will starve to death.

Mr. Catterson—May be what I have said cannot be understood by all. I am opposed to extracting honey from the lower chamber in the fall, and then be compelled to feed up the bees with sugar syrup to take them through the winter. If they had the honey, in my opinion, it is not necessary to give them the granulated sugar in the spring; if it is necessary to give it at all, give it in the fall rather than lose the bees; but if the brood-chamber is old, then no honey should be taken out of it. The bees will store enough honey to winter them. Some of my colonies swarmed the past season just when I did not want them to, and I gave them honey from the other hives.

Pres. Russell—Here seems to be the problem throughout the State, where farmers and many others engaged in bee-keeping do not examine the bees closely enough to see that there is plenty of honey to last until February or March. Three-fourths of the bees die in March, chiefly from want of food. The question is how we can best feed the bees.

Mr. Catterson—Some years ago I used bee-candy, but at present I use the sugar syrup, putting it into the hives, if they have not a good quantity of ripe honey. They would take this sugar syrup and put it in the combs; but if you take the cakes of this candy and lay them in just over the clusters of bees, my experience has been that if they have plenty of honey, they will not bother this candy, but if they are poor, then they will go to work on it.

Mr. Simmons—I do not know that I have anything to say that can be of particular benefit. In making chemical analysis of honey, I find that it is composed largely of oxygen and nitrogen as the fundamental constituents. There is an element called "saccharine," which is 240 times sweeter than our ordinary sugar. In feeding my bees I take a little of this saccharine and place it in a quantity of water, and also place with it some loaf-sugar. I find that the bees eat this and appear to fare well, much better than those which were fed on sugar syrup or the stick candy. I like to try all plans and experiments, and if I can find a safe plan, an easy one, and one that is remunerative to me, I try it, and am always perfectly willing to give to my neighbors the benefits of my experiments.

Mr. Pope—I heard two parties say that they fed their bees on this granulated sugar and lost them.

Mr. Simmons—That was doubtless on account of the inorganic substances which it contained, such as lime, chalk, and other things.

The convention then adjourned until 9:30 a.m. the next day.

(Continued next week.)



Keeping Bees Near a Railroad —Queen Cramps, Etc.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

A correspondent wishes to know if it will be a damage to an apiary, if located within ten rods of a railroad. As a rule it should not, yet if the bees are to be wintered in a cellar or under-ground cave, such as I use, the jar from the trains might cause trouble. As I live some eight miles from the railroad, I have little experience along this line, but a friend of mine who lived within six rods of the railroad told me that he believed that very much of his loss during

winter was owing to the disturbance of his bees caused by this railroad.

While there one day, about train time, he invited me to go into his bee-cave, or special underground repository in which he wintered his bees, to see what I thought about the matter. The repository was a nice one, in fact the nicest I ever saw, as the sides and bottom were of a clean white sand, and kept at a uniform temperature of from 42° to 46°. When we went into the cave the bees were very quiet, as much so as they ever are in my own cellar. We struck no light, as he wished me to note the effect of the train on the bees, the same as it would be every time a train passed.

Soon we began to feel a slight jar of the ground, and in a moment more the bees began to buzz, or show signs of being disturbed, which increased as the train neared; and as it went by, the trembling of the earth in this dark place was so great that it was anything but pleasant to me, and I did not wonder that the bees became so awakened that they came to the entrance of their hives to see what the trouble was.

He told me that this disquietude continued from ten to fifteen minutes after the passing of every train, while toward spring they hardly became quiet between the passing of the trains. Fortunately, on this road there were few trains run, still he was never successful in wintering bees in this cellar, and soon moved to a different locality. Since then, I have felt as though I should prefer some other place for cellar-wintering of bees, besides near a railroad.

WORKING-QUALITIES OF BEES.

Another correspondent writes that he thinks that the Italian bees work best on basswood and thistle, and the black bees on raspberry and buckwheat; and asks if I have found such to be the case.

After very close watching of these bees for a long term of years, I have failed to find a single instance where the blacks exceeded the Italians as to honey-gathering, no matter on what plant or tree they were working, while at many times the Italians were actually making a gain when the blacks were consuming their stores. For this reason I discarded the blacks for several years.

Later on I saw an advertisement telling of a large brown bee which would bring in honey when no other bee could; and of an industrious gray bee that was away ahead of most of the bees in the country; and not wishing to be behind, I sent for some of these. After a thorough trial of both they only proved, as I

had expected, that each was not different from the black bee of our fathers' time.

Next I tried the much-praised hybrids, said to be the coming *Apis Americana*, and I found them not a whit ahead of the hybrids which I had had for years; at least the profits made from the sales of honey from the Italians were ahead of those from any of the others, so I parted company with all the rest.

I know that black bees will store more dark or buckwheat honey than the Italians, but my experience is, that at the same time this is being done, the Italians are storing more white honey from red clover, white-weed and selendine, than the others secure from buckwheat. When this white honey is not obtainable, then the Italians store of dark honey an equal amount with the blacks.

QUEENS CRAMPING.

Another writes, "When clipping my queens' wings some of them go into spasms, or have cramps which double them all up. What is the cause?"

When queens are caught by the wings they often double up and appear to have a cramp, some having reported that death was the result. For a long time I supposed this doubling up was caused by a real cramp, but after a close observation I learned what the trouble was, with my queens, at least.

I caught a queen to clip her wings, when she doubled up as has been described. I thought to let her go as I had always done before when they had thus cramped, but I hesitated as she was very shy and I did not like the thought of hunting for her again, so I concluded to clip her though she died. I lowered my hands very close to the top of the frames, and clipped off all four of the wings as I usually do. She lay on the top-bar of a frame apparently lifeless, so it gave me a good opportunity to examine her closely, when I soon saw that she had one of her front feet tightly clamped in the opening from which the sting extrudes. In a moment more she began to kick about (as the bees hovered around her, so she saw she was in her own home), when the foot was loosed by the opening parting, and she crawled down among the bees unharmed.

Since then I have seen other queens doubled up in this same way, and always found the case the same as above. As the queen is lifted by the wings she struggles to get hold of something, to liberate herself if possible, and in these struggles curves her abdomen and partly thrusts out her sting. While in this

shape one of the front feet catches hold of this apparently secure foothold, upon which the opening is closed from the sensation caused by the foot—holding the foot as in a vise—thus keeping the queen in her doubled-up position as long as the foot is so held.

Borodino, N. Y.

Will of the Queen vs. the Compression Theory, Etc.

Written for the American Bee Journal

BY DR. C. C. MILLER.

Mr. Editor, I see you are determined I shall have no comfort in the columns of the "Old Reliable." There was that woman from Texas, pounding away at me with her "will" theory, and now you have got in a man from Germany that's worse still. I could get along after a fashion with all the Texas woman had to say, for no matter what argument she brought up, I could say, "But in that case the queen is in a different position from what she is in a drone-cell." But Herr Reepen comes out in the *Centralblatt* with the point that the cells of *Apis dorsata* are all alike, whether drones or workers are reared in them, and if the cells are all the same size, how can there be any difference as to mechanical compression? Now you see, no matter how much I might squirm and wriggle out of other arguments, I don't see any possible answer to that. So the compression theory must be given up entirely; but please don't print this in the copy you send to Mrs. Atchley. I don't want her to crow over me.*

AGE OF QUEEN WHEN BEGINNING TO LAY.

I suspect there may be some mistake on the part of the reporter or printer on page 496, where C. F. Muth is made to say, "On the fourth or fifth day after the queen is hatched, she begins to lay." Our genial German friend is too well posted, and careful in his statements, I think, to make such an assertion. Dadant and Alley make five days the shortest time between the birth of a queen and her first bridal-flight, and Dadant says she lays two days later, making seven days the *shortest* time for a queen to begin laying. He makes the average time 8 or 9 days. Root gives 9 days as the average age of commencing to lay. As a rule, I don't look for eggs until a queen is about 12 days old, for

although she may commence to lay before that, it takes less time to find eggs when they are plentier, and some queens are slow about commencing to lay.†

QUEEN OR WORKER?

Friend Lindbeck needn't feel humiliated if he should not in all cases be able to tell a worker from a queen. I'm sure I've been so puzzled. Moreover, I've seen workers encircling and caressing a bee that I thought was a worker. But I don't know whether they would follow her if she were held on the hand.

REDUCING BEES 100 PER CENT.

Isn't friend Butts proposing rather too savage a reduction on page 504? He says: "I firmly believe that if the stock of bees could be reduced a hundred per cent. in this section of the country at least, apiarists would be rewarded by more surplus honey, and hence far greater profits." They would hardly get more surplus honey by killing *all* their bees. Or has the "intelligent compositor" been taking liberties with friend Butts' figures?‡

Marengo, Ill.

[*We don't believe Sister Atchley will "crow" one bit. She may, however, "go trotting off, laughing in both sleeves," as she suggested Dr. Miller might do, on page 492. But, then, it would be just like the Doctor to laugh, too—he's so good-natured he just couldn't help it if he should try.

†It must have been the mistake of the reporter, for we printed it exactly as it was written with a typewriter.

‡Mr. Butts likely meant 50 per cent.; but again we can inform the Doctor that we printed it *exactly* as Mr. Butts wrote it. Our "intelligent compositor" *never* takes any "liberties" with anybody's "figures." She (for our excellent and intelligent compositor is a lady) is just waiting for a good chance to get even with the Doctor for such insinuations. When all the women-folks get after him, he'll scatter his "stray straws" worse than ever. If we didn't think so much of the Doctor ourselves, we would certainly be inclined to laugh at his "stray straw" patch predicament—if such should ever materialize!—Ed.]

Spreading the Brood Unnecessary and Cruel.

Written for the American Bee Journal
BY L. G. REED.

I am, and have been for many years, a reader of the AMERICAN BEE JOURNAL, and I have read so much about spreading the brood, that I feel constrained to have my say upon the subject. Notwithstanding I break new ground on the long-established views and practices of probably all of the most advanced beekeepers, yet when a fellow thinks he is right, he has a good right to think he is right as any one else, and it is pretty hard for any one to engage in any pursuit for 20 years without advancing and practicing theories of his own, and this is what I have done in reference to the spreading of brood, to my perfect satisfaction.

I have demonstrated by actual test and experience that it is not only cruel, but absolutely unnecessary to spread brood at all, either in early spring, or any other time; and I have often been surprised that such men as Mr. Doolittle, living in this Northern changeable climate as he does, would practice such a manipulation.

Now, in order to give my plan in full, I shall have to commence by giving my spring management, which is as follows:

The first warm days in March or early spring, when the bees fly, I light the smoker, take an empty hive, and a carpenter's scraper, which is made of a piece of saw plate or blade, I go to hive No. 1, blow a few whiffs of smoke in at the entrance, then proceed to open them up. I take out four or five frames, or enough to give me room to work, and set them in a hive provided for the purpose. I then with the scraper clean that portion of the hive, then place the remaining frames to that side of the hive, and finish cleaning the hive, giving it a thorough scraping out.

I then select such of the frames as have brood and eggs in, and place them to one side of the hive—the sealed brood in the center, the eggs outside. I then give them a couple of frames of honey, placing one on each side of the brood-nest, if they have bees enough to cover this many frames, if not, I give them a less number, or just what they can nearly cover. I then place a division-board at their side, leaving a bee-space at the bottom, so that the bees can go under to get any stores that may be in the remaining frames, which I place on

that side of the division-board, scratching with a common table-fork any places containing sealed honey—if there is not too much, if there is, I only scratch a part of it.

I now close them up, leaving off the burlap, and putting on the oil-cloth covers and cushions, and tuck them down snugly to keep them as warm as possible.

I go over the entire apiary and treat all as I have this one, unless there should happen to be a strong, vigorous colony; these I clean and leave all the frames in, placing the brood in the center.

Now as the season advances and they require more frames, on account of having those already in full of brood, I open them up and examine; if they need room, I add a frame each side of the brood-nest; if the center frames are nearly empty of brood and eggs, I place them on the outside of the brood-nest; also, always keeping the sealed brood in the center as much as possible, and the open brood next to the stores. This plan prevents the possibility of chilled brood, and saves the energy of the bees, which is quite an item previous to and during a honey-flow.

Now I want some of our progressive bee-keepers to try this plan, along side of their brood-spreading plan, and if they do not get better results with the same or less labor, then I will go and crawl into a hole, and take the hole in after me.

My plan is no new thing to the bees—they have known of it, and practiced it, when let alone, as long as there have been bees, and I sometimes think they know just a little more about their own business, and attend to it better, than some people; man's cruelty to, and supposed superiority over, the lower animals, to the contrary notwithstanding.

Kent, Ohio.

Against Sealed Covers—The House-Apiary, Etc.

Written for the American Bee Journal
BY B. TAYLOR.

The weather is quite cold here to-day (April 14th). The bees are yet in the cellar. They have wintered in first-class condition. I left some 20 colonies with sealed covers again this winter; they have been more, and are now more, restless than those covered with porous covers. The hives are damp, and un-

satisfactory. I filled one apartment of my cellar, last fall, with 80 colonies, prepared as follows:

Each colony was left in 2 stories of my shallow hive; 2 combs were taken from each hive, leaving the bees on 16 combs, $6 \times 18\frac{1}{2}$ inches. These combs were spread to fill the 10-frame hive, and the bee-space between each set of frames, made a central passage to all parts of the hive. They were covered by spreading a square of cotton-sheeting over each hive. On top of this I put a shallow box, 3 inches deep, the bottom of cotton cloth nailed on; the boxes are large enough for the cloth to rest on the edges of the hive top, and are always sure to be tight. These boxes were filled level full with dry, fine sawdust.

The temperature of the cellar was uniformly very near 42° , and, as to results, these bees have remained quieter; there have less bees flown out on the cellar bottom than I ever knew in my experience of 40 years. The colonies are all alive to-day, and so quiet that I can only hear a very slight murmur.

I prepared some 50 hives by putting some thin strips, one-thirtieth of an inch thick under the board covers. These bees have wintered fairly, but not equal to those first named, as many more bees flew from the hives to the cellar floor.

I have made some inquiry, and find that the bees of neighbors in this part of the country have wintered poorly; those with sealed covers being dead, as a rule, where wintered in out-door packing, and all dead where unprotected.

PLEASED WITH THE HOUSE-APIARY.

My new house-apiary is just now finished. It is a beauty, of which I feel proud. I find I can accommodate 46 colonies in the 8×16 feet building, without crowding. I had expected to fill it with bees about March 1st, but the very severe weather prevented. I will fill it now when the weather has moderated sufficiently, with bees from the colonies that have wintered so nicely, and shall expect to be able to make a good report for house-apiaries this Columbian year.

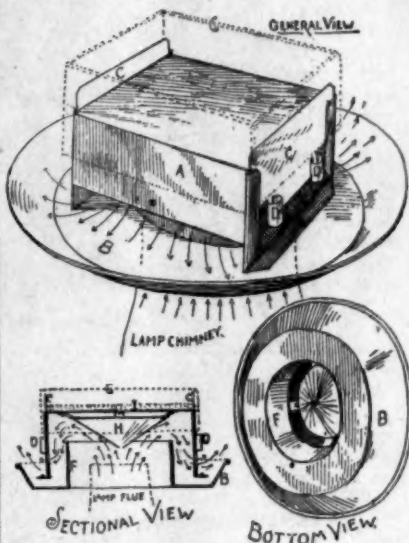
I have demonstrated in the past unusually hard winter that bees, will winter perfectly in house-apiaries, if properly prepared, as hives in my little, imperfect house came through with bottom-boards as clean as in summer.

THE COMB-LEVELER—A NEW THING.

I send you one of my new machines for preparing sections filled with empty comb for use again. It will be seen by reading *Gleanings* for March 1st, page

207, how such veterans as Manum have despaired of producing salable honey by using these sections of comb again, and have resolved, as many others have done, to melt the combs for wax, and burn these sections.

Now, I regard such empty combs as nearly equal in value to completed sections of honey, to use as "baits" to get the bees into the supers early in the honey-flow, and to be filled rapidly in a short flow in poor years. All my finished honey for the last two seasons was of this kind, and by the use of this little, cheap machine, the honey was equal in appearance to combs built on new foundation.



B. Taylor's Comb-Leveler.

In using the comb-leveler, take a small box with the front left out, to set the lamp in, and cut a circular hole in the top, $7\frac{1}{4}$ inches in diameter, to set the pan in. The box should be high enough so the lamp chimney will go within $\frac{1}{4}$ or $\frac{1}{2}$ inch of the tin cone in the round hole in the bottom of the pan. A block can be put under the lamp to make it just right.

Put a little water in the bottom of the pan for the melted wax to run into, and light the lamp. By turning the wick up or down, the right heat can be secured. The heated plate should be hot enough to melt the comb in the section quickly, but not to burn the wax.

Now take a section with comb, and

press upon the heated plate first one side, and then the other. When the comb is full and plump, place the wide side of the section on the stops, but when less full, and you need to melt deeper, turn the narrow part of the section on the stops. Keep an old table-knife to scrape the waste from the top of the hot plate often. The wax will run into the water in the pan below, and may be emptied as required.

Practice these directions carefully, and you will find the combs melted to equal, even surfaces, and left in such condition that the bees will have to add a little new comb to the end of every cell, and the finished honey will be white, and of even weight. Combs thus prepared may be used without separators.

Fillmore Co., Minn.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

In Total Darkness for 167 Days.

Reading the reports from many quarters of "pollen plenty," "balmy April," or "hives filling up with young bees," I am led to ask myself if I have the coldest locality in North America where bees are kept. We have had high winds, cold and snow nearly all the year so far, so that there has been but two or three days suitable for bees to fly. Neither the soft maples nor elm, which give us the first pollen of any account, are open yet, and as the weather has been extremely unfavorable, the bees are in the cellar. They were put in on Nov. 10, 1892, and when I will get them out depends upon the weather. I have been in the cellar to-day, and they appear quiet and nice after their 167 days of total darkness. G. M. DOOLITTLE.

Borodino, N. Y., April 20, 1893.

Appreciated Octogenarian Bee-Man.

The AMERICAN BEE JOURNAL has been a constant weekly visitor since the fall of 1881. I believe every copy has come regularly since that time. Such regularity

speaks volumes for the helmsmen of our "good ship of bee-lore," who have justly earned the name "Old Reliable" for it. May it live long, and always merit the title, is my wish.

I would like to mention with pleasure seeing the letter from our old friend W. P. Taylor, of Fitzroy Harbor, Ont., the octogenarian subscriber, published on page 344. Although in Manistee, Mich., now, it was at his apiary that I first saw the honey extractor, pound sections, comb foundation, and other great improvements in the pursuit which, when we consider the time (I think about 18 years ago), it would seem as if our friend were taking in every improvement as soon as invented. Being eager to grasp the new and the good, and being a close observer, his store of knowledge must have a wide range. I remember seeing a very neat, concrete, octagonal bee-house for wintering bees in.

Mr. Taylor's experience must be very extensive, and I think we have missed it not to have heard from him occasionally. I know it was a great pleasure to me to visit his place, and although the bee-business was in its infancy with me, I feel safe in saying that Mr. Taylor was one of the pioneer scientific bee-keepers of Ontario. I think he was very modest in putting forth any conclusions, and perhaps this is why we have not heard more from him. I did not write this for publication, but I could not very well see him passing out of our ranks (as he seems about to do) without telling of my acquaintance with him. I am too poor a writer to do him justice, which I very much regret.

Manistee, Mich. W. HARMER.

Mortality of Bees in Winter.

I notice on page 297, that Mr. M. D. Andes is alarmed at the rate his bees carried out their dead during their winter flights. Usually this would be considered a sign that they were in a healthy condition, but if continued at an extreme rate, of course it would result in total annihilation. Not knowing, I could only hint at what might be the possible cause.

He says they have plenty of honey, which shows that they must have been strong, and in good condition during the early fall, and filled their hives to overflowing, and probably crowded their queen out of room to lay, thus cutting off brood-rearing at a very early date, which resulted in the destruction of the drones and consequent idleness of the workers, except to gather enough perhaps to make up for the amount consumed.

Now in this quiet, contented condition, their mortality would be very light, and the colonies would go into winter quarters with plenty of stores, and strong in bees, but mostly old ones. This being their condition during late autumn, their winter mortality, as might be expected, would be great, owing to the extreme age of the majority of the bees; and more especially, if the weather should be warm so as to admit

of continuous flights, for one good flight at that season is more exhausting than several days would be during their early autumn life.

In a warm climate there need be but little fear from loss from winter flights, but in a more Northern latitude the cluster would soon become so reduced that, should the weather change to severe cold, they would chill and die, with plenty of honey within easy reach, or they would dwindle out during the early spring.

It is wrong to allow bees to so crowd their hives with honey as to curtail brood-rearing too early in autumn. Thousands of colonies are lost annually from this one neglect. They should be carefully looked after, and when discovered approaching this condition, remove 1 or 2 rear frames of honey and spread the brood-nest and insert empty combs in the center, so as to allow the queen a place to lay. Then if the blooming season should be suddenly cut short, before this brood has time to mature, feed immediately, so as to maintain the late brood, and make up for what you have taken away. But if the supply of nectar holds out, feeding will be unnecessary.

Leonidas, Mich.

D. MILLARD.

Severe Winter in Tennessee.

The past winter was the hardest and most severe in this section of the country since the year 1885. It has been a hard winter on bees. Several people lost 25 to 30 colonies each. I tried to get them to pack their bees last fall, but they would not do so.

I am only 19 years of age. I started with one colony of Italians, and now I have three—one being black. I learn something about bees every day.

The prospects are bright this spring for a good yield of honey. I hope that my bees will do well. Last season was a poor one for bees here. I had to feed mine all through the summer and fall, granulated sugar made into syrup, to keep them alive, and bring them safely through the winter. Last fall I packed them, putting a cushion on each side of them, and one on top, and now they are all O. K., and doing well, under the circumstances.

PORTER FEATHERS.

Whitesburgh, Tenn.

Honey-Producing Trees and Plants.

A BEE JOURNAL correspondent wished to know what to plant to increase the bee-pasturage. A very long list of trees and plants might be given, but a few of the most common and useful, as well as ornamental, might be added to the list given. Among trees, the willow comes first; maple, horse-chestnut and locust; European linden (earlier than basswood); fruit-blossoms of all kinds, currants, gooseberries, raspberries and barberry; honeysuckles, plum-leaved and elm-leaved, are all attractive; clovers of all kinds, grass, wheat, and corn, with pumpkins, as well as buckwheat, are all in their season utilized by the bees.

In the flower-garden the first is the crocus and lillies, small but very easily grown; meadow-sweet, spiderwort, varonica and sweet clover, the last-mentioned to be planted in waste places with catnip and viper's bugloss of the borage family.

Of annual plants, the poppy is the most attractive, eutoca, phacelia congesta, with mignonette all the season.

Bees are yet held by the grip of winter, sometimes down to 15 degrees below zero, without any outside packing, with liberty of flight which they have enjoyed, while I have been closed in with more bees than I know what to do with.

B. LOSEE.

Cobourg, Ont., April 2, 1893.

Mr. William Stahl, of Quincy, Ills., the well-known manufacturer of spraying outfits, as advertised in these columns from time to time, has published a number of neat little pamphlets on subjects connected with spraying, among them being "Spraying fruits, how, when, where and why to do it;" "Spraying apple orchards;" "How to prevent and destroy diseases and insects affecting grapes;" "Insects and fungus diseases affecting all varieties of small fruit and vegetable crops;" Full directions for spraying fruits, vegetables and flowers," etc. Any or all of these little books are sent free of charge to any one who will ask for them, and each and every one of them contains much valuable information on the subject treated, and information, too, that should be in hands of every farmer and fruit-grower in the land. Write for them to William Stahl, Quincy, Ills.

Speaking of Family Story Papers, a well-known writer once said that the *Family Ledger* published in Los Angeles, Calif., is, without question, the cheapest and best printed illustrated family weekly in the world. Over 60 complete serials are run in a year's issue. The paper has many copyrighted features, and is illustrated each week. To those who are unacquainted with this remarkable periodical, a special offer is made of 10 weeks for 10 cents. Few that read story papers will allow an opportunity to pass whereby they can secure so unique a paper for such a small sum. 18C3t

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, April 29th. 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.

R. A. B. & Co.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.

Beeswax—20@23c.

C. M. C. C.

CINCINNATI, OHIO.—There is a fair demand for extracted honey at 6@8c. There is no choice comb honey on our market, and prices are nominal at 14@16c. for best white. Beeswax—Demand good, at 24@27c. for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Comb honey is well cleaned up. Fancy white is selling at 14@15c. Off grades, 12@13c., and buckwheat, 9@10c. Extracted is dull, and the market well stocked with West India honey, which sells at from 65@75c. per gallon. Beeswax, 26@28c.

H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c.

S. L. & S.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.

Beeswax—None on hand

B. & R.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c.

J. A. S. & C.

ALBANY, N. Y.—Honey market quiet at following prices: White comb, 14@15@16c.; mixed, 12@13c.; dark, 10@11c. Extracted, white, 8@8½c.; mixed, 7@7½c.; dark, 6½@7c. Beeswax, 26@30c.

H. B. W.

Mrs. J. P. Cookenbach, whose advertisement appears on page 517, will be glad to have you write to her to secure a good place to stay during your visit to the World's Fair the coming summer. The BEE JOURNAL refers its readers and friends, with much pleasure, to Mrs. C., who will do the right thing by all who give her an opportunity to help them.

Annual Catalogues or Price-Lists we have received from—

Leininger Bros., Ft. Jennings, O.—Italian Queens.

J. J. Bradner, Marion, Ind.—Bee-Keepers' Supplies.

Jos. E. Shaver, Friedens, Va.—Bee-Keepers' Supplies.

Plinney Shepardson, Catlin, Wash.—Aplarian Supplies.

Wm. H. Bright, Mazeppa, Minn.—Bee-Keepers' Supplies.

E. H. Trumper, Bankers, Mich.—Bee-Keepers' Supplies.

Mrs. J. N. Heater, Columbus, Nebr.—Bee-Keepers' Supplies.

J. Van Deusen & Sons, Sprout Brook, N. Y.—Comb Foundation.

J. H. & A. L. Boyden, Saline, Mich.—Bee-Keepers' Supplies.

Walter S. Pouder, Indianapolis, Ind.—Bee-Keepers' Supplies.

E. J. Scofield, Hanover, Wis.—Strawberry and Raspberry Plants.

S. F. & I. Trego, Swedona, Ill.—5-Banded Golden Italian Queens.

A. E. Manum, Bristol, Vt.—Leather-Colored Italian Bees and Queens.

H. G. Acklin, 1024 Miss. St., St. Paul, Minn.—Bee-Keepers' Supplies.

W. P. Crossman, Ballinger, Tex.—Five-Banded Golden Italian Queens.

C. A. Montague, Archie, Mich.—Bees, Honey, and Bee-Keepers' Supplies.

Edward Gillett, Southwick, Mass.—Wild Flowers, Ferns, Bulbs, Etc.

Mrs. A. A. Simpson, Swarts, Pa.—Italian Bees and Queens, Poultry, Etc.

J. N. Colwick, Norse, Tex.—Italian Bees and Queens, and Aplarian Supplies.

F. C. Morrow, Wallaceburg, Ark.—5-Banded Golden Italian Bees and Queens.

Miller Bros., Bluffton, Mo.—Bees, Queens, Hives, and Bee-Keepers' Supplies.

Theodore Bender, Canton, O.—Bee-Keepers' Supplies, Italian Bees and Queens.

Phoenix Nursery Co., Bloomington, Ill.—Trees, Plants, Shrubs, Roses, Bulbs, etc.

Chas. F. Muth & Son, Cincinnati, O.—Honey, Beeswax, Seeds and Bee-Keepers' Supplies.

W. T. Falconer Mfg. Co., Jamestown, N. Y.—Bee-Hives, Sections and Bee-Keepers' Supplies.

G. K. Hubbard, Ft. Wayne, Ind.—Hubbard Hive, and Section Press, and other Bee-Keepers' Supplies.

Gould, Shapley & Muir Co., Brantford, Ont., Canada.—Bees, Italian Queens, Bee-Keepers' Supplies and Honey.

Your Neighbor Bee-Keeper

—have you asked him or her to subscribe for the BEE JOURNAL? Only \$1.00 will pay for it for a whole year. And, besides, you can have Newman's book on "Bees and Honey" as a premium, for sending us two new subscribers. Don't neglect your neighbor! See page 389.

"Bees and Honey"—see page 549.